STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
COOKEVILLE ENVIRONMENTAL FIELD OFFICE
DIVISION OF WATER POLLUTION CONTROL
1221 SOUTH WILLOW AVENUE
COOKEVILLE, TN 38506
PHONE 931-432-4015 STATEWIDE 1-888-891-8332 FAX 931-432-6952

April 13th, 2012

CERTIFIED MAIL
91 7108 2133 3937 2533 5094

Honorable Maria Baker, Mayor
City of Alexandria WWTP
City Hall
P.O. Box 277
Alexandria, TN 37012

RE: COMPLIANCE EVALUATION INSPECTION
City of Alexandria Waste Water Treatment Plant, TN0021539
Highway 53, Alexandria, Dekalb County, Permit Expiration: February 28th, 2012

Dear Mayor Baker:

On March 26th, 2012, Division of Water Pollution Control (DWPC) staff conducted a Compliance Evaluation Inspection (CEI) at the City of Alexandria Waste Water Treatment Plant (WWTP). This inspection included a site review and a review of the Monthly Operational Reports (MOR) and Discharge Monitoring Reports (DMR).

Records and Reports

Staff reviewed WWTP records. The temperature logs were in good order. Information is being retained for three years. Analytical Bench Sheets were consistent with the sampled MOR/DMR data. The NPDES permit renewal application has been received. Additional information was required. The renewal application is in process.

Facility Site Review

The Sequencing Batch Reactor (SBR) was operating. Two seals on the discharge covers in the SBR units were functioning well. The facility was clean. The grit removal device was operational. A "Flo-Mate" sludge thickener is being used on site. The thickened solids are taken to a landfill for disposal. The old plant's existing lab building houses the blowers for the SBR. The SBR computer is located in the blower room. The digester was operational. Objectionable odor was not notable. Emergency power was available.

The stabilization basin was discussed. The operator is going to use a portable pump within the equalization basin to remove solids on a daily frequency. The operator believes this will improve the quality of the discharge and reduce effluent violations. The effluent discharge was clear however an algal bloom was present below the discharge apron. The algal establishment may be the result of current conditions created in the equalization basin. The algal issue was noted in the previous inspection.

Flow Measurement

The influent flow meter transducer submerges during heavy rain events. The influent flow is then off the scale. This may become a maintenance issue in the future. The influent composite sampler was operational. An internal thermometer was present in the refrigerator.

The effluent meter was operational. The plant operator states that the flow meter is too far down stream of the electronic flow control valve. He believes that the distance hinders the precise control of the flow. Currently the flow valve is operated manually. The flow proportional effluent sampler was operational. An internal thermometer was present in the refrigerator.

Laboratory

The lab equipment was operational with calibration decals placed on the devices by Labtronix. The "Ammonia" test is contracted to an outside laboratory. Chain of Custody documentation was available. Quality Control procedures in the lab need some improvement (additional testing). Calibration Log Books and Laboratory Bench Sheets have improved. Bench sheets still require some minor tweaking. The CBOD test procedure is to be reviewed within the "Standard Methods" text. On some occasions the initial dissolved oxygen (D.O.) is above 9 mg/l. The initial D.O. should be at a level below super saturation (less than 9 mg/l).

Operation and Maintenance

The operator has performed maintenance on several WWTP components in the facility, e.g. the SBR discharge seals. Spare parts for various types of equipment are on site. The operator manually operates the effluent discharge valve.

Sludge Handling

The digester is large and well aerated. Adequate sludge handling and disposal is easily maintained using a polymer in conjunction with a screened filter box (sludgemate). The sludge is disposed at a local landfill. Alexandria's wastewater is largely domestic with little industry.

Collection System Overflows

Problems with the collection system are illustrated (after or during rain events) by the reported flows on the MORs. It is required by the Cookeville Environmental Field Office that the operator call all sewer overflows into the office within 24 hours of occurrence. In addition, a separate overflow report is to be submitted with the MOR and the DMR. The overflow report should provide data such as reason for the overflow and the overflow amount and duration (date: start and end time).

Recommendations

- ✓ Please continue to perform sewer line maintenance in order to reduce the inflow of storm water into the sewer collection system.
- ✓ Please review 40CFR 136 and Standard Methods with regard to the performance of the CBOD analysis. The initial dissolved oxygen level in the BOD bottle should be allowed to deplete super saturated dissolved oxygen to a level below 9 mg/l.

The Division of Water Pollution Control would like to thank Mr. Marvin Smith for his time and courtesy during this inspection.

If you have any questions, you may contact me in Cookeville via telephone at (931) 432-7635 or toll free at 1-(888)-891-8332. You may also use electronic mail at: Oakley.Hall@tn.gov.

Sincerely,

William O. Hall
Environmental Field Office Manager
Division of Water Pollution Control

Enclosure: EPA Form 3560.

cc:
EFO-CK, DeKalb County DWPC File
Jimmie Lee Clark – Cookeville Environmental Field Office Director

United States Environmental Protection Agency
Washington, D. C. 20460

Water Compliance Inspection Report

Section A: National Data Coding (i.e., PCS)

Transaction	Code	NPDES	yr / mo / dy	Inspection Type	Inspector	FacType
1 N	2	3 TN0021539	17 120326	18 C	19 E	20 1

Remarks

21 City of Alexandria WWTP (Minor Facility) 66

Inspection Work Days	Facility Self-Monitoring Evaluation Rating	BI	QA	Reserved
67 2 69	70 3	71 N	72 N	73 74 75 80

Section B: Facility Data

Name and Location of Facility Inspected (*For industrial users discharging to POTW, also include POTW name and NPDES permit number*)

City of Alexandria Waste Water Treatment Plant
Highway 53
Alexandria, Tennessee 37012

Entry Time / Date	Permit Effective Date
≈9:30 03/26/12	April 1st, 2008
Exit Time / Date	**Permit Expiration Date**
≈12:00 03/26/12	Feb. 28th, 2012

Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s)

Mr. Marvin Smith – Operator Home # (615) 529 - 2971
Fax: (615) 529 - 4152

Name, Address of Responsible Official/Title/Phone and Fax Number

Mayor Maria Baker (615) 529 - 2171
City of Alexandria, City Hall ☐ Yes ☒ No
105 High Street Fax: (615) 529 - 4345
Alexandria, TN 37012

Other Facility Data (*e.g., SIC NAICS, and other descriptive information*)

SBR system, treats 0.3 MGD per day Equalization Basin and U.V. disinfection. DMRQA-31 was acceptable.

Operator would like to improve the Performance of the post e. q. basin.

Receiving stream is 303 d listed

X	Permit		Self-monitoring Program		Pretreatment Program		MS4
X	Records / Reports		Compliance Schedule		Pollution Prevention		
X	Facility Site Review	X	Laboratory		Storm Water		
X	Effluent / Receiving Waters	X	Operation & Maintenance		Combined Sewer Overflow		
	Flow Measurement	X	Sludge Handling / Disposal		Sanitary Sewer Overflow		

Section D: Summary of Findings/Comments

(Attach additional sheets of narrative and checklists, including Single Event Violation codes, as necessary)

SEV Codes | SEV Description

E Q Basin issues have yet to be resolved, Portable pump is to be utilized/daily frequency.
The collection system repairs continue.
CBOD review and improvements requested.
Receiving Stream is Hickman Creek, 303 d Listed, an algal bloom was present at apron.

Name (s) and Signature(s) of Inspector(s)	Agency / Office / Phone and Fax Numbers	Date
William Hall Oakley.Hall@TN.gov	Tennessee Division of Water Pollution Control Cookeville Environmental Field Office 931/432-4015 / 931/432-6952 (FAX)	4-13-12
Signature of Management Q A Reviewer Jimmie Lee Clark Jimmie.L.Clark@TN.gov	Tennessee Division of Water Pollution Control Cookeville Environmental Field Office 931/432-4015 / 931/432-6952 (FAX)	4-13-12